In the Claims:

1. (Withdrawn) An apparatus, comprising:

a current collector for a fuel cell stack, wherein the current collector physically supports the fuel cell stack within a fuel cell; and

an electrode element of the fuel cell stack attached as a deposited layer to the current collector, wherein the current collector has openings to allow gases of the fuel cell to flow to and from the electrode element.

2. (Withdrawn) The apparatus as recited in claim 1, further comprising an electrolyte attached as a deposited layer to the electrode element.

3. (Withdrawn) The apparatus as recited in claim 2, further comprising a subsequent electrode element attached as a deposited layer to the electrolyte.

4. (Withdrawn) The apparatus as recited in claim 3, further comprising a subsequent current collector attached as a deposited layer to the subsequent electrode element, wherein the subsequent current collector has openings to allow gases of the fuel cell to flow to and from the subsequent electrode element.

5. (Withdrawn) The apparatus as recited in claim 4, further comprising an electrical interconnect connected to one of the current collectors.

6. (Withdrawn) The apparatus of claim 2, wherein the electrolyte layer is attached to the electrode element as a deposited layer having a thickness between approximately 1 micron and approximately 5 microns.

7. (Withdrawn) The apparatus of claim 2, wherein the electrolyte layer is attached to the electrode element as a deposited layer having a thickness less than approximately 1 micron.

8. (Previously Presented) A method, comprising:

obtaining a first current collector layer suitable for physically supporting parts of a fuel cell stack, wherein the fuel cell stack includes at least two electrodes and an electrolyte layer;

depositing a first electrode on the first current collector layer;

depositing the electrolyte layer of the fuel cell stack on the first electrode layer;

depositing a second electrode layer of the fuel cell stack on the electrolyte layer; and

depositing a second current collector layer of the fuel cell stack on the second electrode layer.

9. (Previously Presented) The method as recited in claim 8, wherein the first current collector is made of a first material suited to support the fuel cell stack and the second current collector is made of a second material not suited to support the fuel cell stack.

10. (Previously Presented) The method as recited in claim 8, further comprising defining an etch pattern on the first current collector configured to expose a surface of the first electrode, wherein the pattern is configured to allow the first current collector layer strength to support the fuel cell stack.

11. (Previously Presented) The method as recited in claim 8, wherein obtaining the first current collector layer comprises a stress relief step to release potential energy of unstable molecular configurations that helps the first current collector layer hold a flat surface during temperature variations.

12. (Previously Presented) The method as recited in claim 8, further comprising cleaning at least one flat surface of the current collector material to reduce contact resistance.

13. (Previously Presented) The method as recited in claim 8, further comprising depositing the first current collector layer on a mandrel surmounted by a release layer.

14. (Previously Presented) The method as recited in claim 8, further comprising removing the mandrel and sintering the first current collector layer and the first electrode.

15. (Previously Presented) The method as recited in claim 8, further comprising mounting the fuel cell stack in a fuel cell, wherein a connection between the fuel cell and at least one of the first current collector layer and the second current collector layer physically supports the fuel cell stack in the fuel cell.

16. (Previously Presented) The method as recited in claim 11, wherein the stress relief step comprises heating the current collector layer followed by slow cooling to allow molecules to settle into stable positions.

17. (Withdrawn) The method as recited in claim 8, wherein the first and second current collector layers are made of the same material, similarly etched and both used to support the fuel cell stack in a fuel cell.

18. (Previously Presented) The method as recited in claim 8, wherein the first and second current collector layers are made of different materials, differently etched and only the first current collector layer is used to support the fuel cell stack in a fuel cell.

19. (Previously Presented) The method as recited in claim 8, wherein the first current collector is etched using a temporary material that is removed during a sintering step which leaves the etched first current collector and the first electrode adhered together.

20. (Previously Presented) The method as recited in claim 8, wherein the depositing is accomplished through any one of painting, spraying, plating, electroplating, electrodepositing, vacuum electrodepositing, dip coating, spin coating, sublimating, and evaporating.

21. (Previously Presented) The method as recited in claim 8, additionally comprising removing some of the first and second current collector layers by any one of chemical etching, dry-etching, mechanical etching, optical etching, laser etching, and electron beam etching.

22. (Previously Presented) The method as recited in claim 8, wherein the first current collector layer has a thickness approximately between ten and twenty times a thickness of one of the electrodes or the electrolyte.

23. (Previously Presented) The method as recited in claim 8, wherein the first current collector layer has a thickness of approximately between ten and one thousand microns.

24. (Previously Presented) The method as recited in claim 8, wherein the first and second electrode layers or the electrolyte layer have a thickness of approximately five microns.

25. (Previously Presented) The method as recited in claim 8, wherein the first and second electrode layers or the electrolyte layer has a thickness less than five microns.

26. (Withdrawn) A method, comprising:

making a patterned form;

depositing a material in the patterned form to make a patterned first current collector layer suitable for physically supporting parts of a fuel cell stack, wherein a fuel cell stack includes at least two electrodes and an electrolyte; and

depositing a part of the fuel cell stack on the patterned first current collector layer.

27. (Withdrawn) The method as recited in claim 26, further comprising:

depositing a first electrode layer of the fuel cell stack on the patterned first current collector layer;

depositing an electrolyte layer of the fuel cell stack on the first electrode layer;

depositing a second electrode layer of the fuel cell stack on the electrolyte layer;

depositing a second current collector layer of the fuel cell stack on the second electrode layer; and

removing the patterned form to expose a surface of the first electrode layer.

28. (Withdrawn) The method as recited in claim 27, further comprising removing some of the second current collector layer to expose a surface the second electrode layer.

29. (Withdrawn) The method as recited in claim 26, wherein the patterned form is a mandrel having a patterned layer of removable material.

30. (Withdrawn) The method as recited in claim 29, wherein the removable material is photo-resist.

31. (Withdrawn) The method as recited in claim 29, wherein the patterned form is removed before one or more of the electrolyte layer, the second electrode layer, and the second current collector layer are deposited.

32. (Withdrawn) The method as recited in claim 29, further comprising sintering at least two layers of the fuel cell stack.

33. (Withdrawn) A fuel cell, comprising:

one or more stack assemblies, each stack assembly having an anode electrode, a cathode electrode, an electrolyte, and at least one supporting current collector, wherein the supporting current collector provides structural integrity to the stack assembly; and

one or more fuel cell chambers to contain the one or more stack assemblies, wherein at least one surface of a fuel cell chamber physically supports a stack assembly using the supporting current collector of the stack assembly.

34. (Withdrawn) The fuel cell as recited in claim 33, wherein each stack assembly is made by depositing a first electrode layer on the supporting current collector, depositing an electrolyte layer on the electrode layer, depositing a second electrode layer on the electrolyte layer, and depositing a second current collector layer on the second electrode layer.

35. (Withdrawn) The fuel cell as recited in claim 34, wherein some of the supporting current collector is removed to expose the first electrode layer and some of the second current collector layer is removed to expose the second electrode layer.

36. (Withdrawn) An electronic device, comprising:

a means for electrochemically producing energy;

a means for containing the means for electrochemically producing energy; and

a current collector to carry electrons to or from the means for electrochemically producing energy, wherein the current collector physically supports the means for electrochemically producing energy in the means for containing.

37. (Withdrawn) The electronic device as recited in claim 36, wherein at least some parts of the means for producing electricity are deposited on the current collector.

38. (Withdrawn) The electronic device as recited in claim 37, wherein at least some parts of the means for producing electricity are deposited by one of painting, spraying, plating, electroplating, electrodepositing, vacuum electrodepositing, dip coating, spin coating, sublimating, evaporating.

39. (Withdrawn) A method of using a current collector, comprising:

depositing an electrode on the current collector;

depositing other elements of a fuel cell on the electrode;

physically supporting the electrode and the other elements of a fuel cell in at least one fuel cell chamber using the current collector;

producing a flow of electrons using the electrode and the other elements of a fuel cell; and

carrying at least part of the flow of electrons using the current collector.

40. (Withdrawn) The method as recited in claim 39, wherein the depositing includes any one of painting, spraying, plating, electroplating, electrodepositing, vacuum electrodepositing, dip coating, spin coating, sublimating, evaporating.